LOCAL GAME EXECUTION FOR SPECTATING AND SPECTATOR GAME PLAY

CLAIM OF PRIORITY

[0001] This application is a continuation of and claims priority to and the benefit of commonly owned, patent application, U.S. Ser. No. 16/526,824, filed on Jul. 30, 2019, Attorney Docket No. SONYP382, entitled "Local Game Execution For Spectator and Spectator Game Play," the disclosure of which is incorporated herein in its entirety for all purposes.

TECHNICAL FIELD

[0002] The present disclosure is related to video games or gaming applications. Among other things, this disclosure describes methods and systems for local game generation for purposes of spectating an event (e.g., live game play of a video game), wherein the spectator may switch from watching the event to actively participating in a simulation of the event.

BACKGROUND OF THE DISCLOSURE

[0003] Video gaming is evolving towards higher and higher resolutions when displaying video frames. For example, the industry has moved from 720p (1280×720 pixels) to 1080p (1920×1080p pixels) resolution and is quickly transitioning to 4K resolution (3840×2160 pixels), which may also be referred to as "ultra high definition". As shown, the 4K resolution may be up to four times as many pixels than used in 1080p resolution images. In the future, video gaming will move to even higher resolutions, such as 8K resolution.

[0004] In addition, video gaming is incorporating back-end server support for providing various types of services. For example, back-end server support may provide for video game streaming, online gaming, providing various other types of information, etc. In particular, the information provided by the back-end server support relies on a robust network to transmit the higher loads of information required by the 4K and 8K video game resolutions.

[0005] However, when the network experiences lower quality of service (QoS), such as suffering from lower bandwidth, then the ability to transmit the entirety of the information is compromised which may result in a poor gaming experience for a user. For example, a player playing in a multi-player gaming session supported by a back-end server that suffers from network deficiencies may experience one or more pauses in his or her game play because of the increased video frame resolution, and eventually may quit playing the game. In addition, a spectator viewing a live event (e.g., live multi-player gaming session) that also is suffering from network deficiencies may not be able to truly view the event in real-time, resulting in the spectator quitting the viewing session.

[0006] It is in this context that embodiments of the disclosure arise.

SUMMARY

[0007] Embodiments of the present disclosure relate to local game generation for purposes of spectating an event (e.g., live game play of a video game), wherein the spectator may switch from watching the event to actively participating in a simulation of the event.

[0008] In one embodiment, a method for gaming is disclosed. The method includes instantiating an instance of a video game at a local device of a spectator. The method includes receiving game state data and user data of one or more players participating in a gaming session. The method includes generating a plurality of video frames of live game play by the one or more players using the game state data and the user data by executing the video game in the instance. The method includes displaying the plurality of video frames for the live game play on a display of the spectator. The method includes generating a local game slice of the video game for a sliced game play while executing the video game in the instance, the local game slice being responsive to a plurality of inputs from a controller device of the spectator.

[0009] In another embodiment, a non-transitory computer-readable medium storing a computer program for gaming is disclosed. The computer-readable medium includes program instructions for instantiating an instance of a video game at a local device of a spectator. The computer-readable medium includes program instructions for receiving game state data and user data of one or more players participating in a gaming session. The computer-readable medium includes program instructions for generating a plurality of video frames of live game play by the one or more players using the game state data and the user data by executing the video game in the instance. The computer-readable medium includes program instructions for displaying the plurality of video frames for the live game play on a display of the spectator. The computer-readable medium includes program instructions for generating a local game slice of the video game for a sliced game play while executing the video game in the instance, the local game slice being responsive to a plurality of inputs from a controller device of the spectator.

[0010] In still another embodiment, a computer system is disclosed, the computer system including a processor and memory, wherein the memory is coupled to the processor and having stored therein instructions that, if executed by the computer system, cause the computer system to execute a method for gaming. The method includes instantiating an instance of a video game at a local device of a spectator. The method includes receiving game state data and user data of one or more players participating in a gaming session. The method includes generating a plurality of video frames of live game play by the one or more players using the game state data and the user data by executing the video game in the instance. The method includes displaying the plurality of video frames for the live game play on a display of the spectator. The method includes generating a local game slice of the video game for a sliced game play while executing the video game in the instance, the local game slice being responsive to a plurality of inputs from a controller device of the spectator.

[0011] Other aspects of the disclosure will become apparent from the following detailed description, taken in conjunction with the accompanying drawings, illustrating by way of example the principles of the disclosure.